

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7	C01G23/07	B01J21/06	B01J37/10	B01J35/10	B01J35/00
	C08K3/22	C09K3/14			

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 C01G B01J C08K A61K C09K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 2004/056927 A (DEGUSSA AG; SCHUMACHER, KAI; BATZ-SOHN, CHRISTOPH; HASENZAHL, STEFFEN) 8 July 2004 (2004-07-08) page 7, line 35 – page 8, line 36 example 1	16,17
A	WO 96/06803 A (UNIVERSITY OF CINCINNATI) 7 March 1996 (1996-03-07) cited in the application the whole document	16,17
A	US 2002/004029 A1 (JANG HEE-DONG ET AL) 10 January 2002 (2002-01-10) cited in the application the whole document	16,17
		-/-



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## ° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
15 February 2005	25/02/2005
Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  Besana, S

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 802 158 A (DEGUSSA-HUELS AKTIENGESELLSCHAFT; DEGUSSA AKTIENGESELLSCHAFT) 22 October 1997 (1997-10-22) page 2, lines 19-51 figure 1 -----	16,17
A	US 6 328 944 B1 (MANGOLD HELMUT ET AL) 11 December 2001 (2001-12-11) the whole document -----	16,17

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP2004/013317

### Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.: 1-15, 18-20 because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
  
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 1-15, 18-20

Present claim 1 relates to a product, i.e. titanium dioxide, defined (*inter alia*) by reference to the following parameter

$HW = a * BET f$  where  $a = 670 * 10^{-9} \text{ m}^3/\text{g}$  and  $f$  is a value in the range -1.3 to -1.0.

The use of these parameters in the present context is considered to lead to a lack of clarity within the meaning of Article 6 PCT. It is impossible to compare the parameters the applicant has chosen to employ with what is set out in the prior art.

Further obscurity arises from claims 4 and 9 defining the "equivalent circular diameter" of the aggregates and from claims 5 and 10 defining the "mean aggregate area", as there is no indication in the description how these parameters are measured.

The lack of clarity is such as to render a meaningful complete search for the subject-matter of claims 1-15 and 18-20 impossible.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/013317

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 2004056927	A	08-07-2004	DE WO	10260718 A1 2004056927 A2		08-07-2004 08-07-2004
WO 9606803	A	07-03-1996	US CA CA DE DE EP JP WO US	5698177 A 2197436 A1 2288438 C 69509396 D1 69509396 T2 0778812 A1 10505316 T 9606803 A1 5861132 A		16-12-1997 07-03-1996 14-11-2000 02-06-1999 28-10-1999 18-06-1997 26-05-1998 07-03-1996 19-01-1999
US 2002004029	A1	10-01-2002	KR	2001094903 A		03-11-2001
EP 0802158	A	22-10-1997	DE EP JP	19615111 A1 0802158 A2 10045402 A		23-10-1997 22-10-1997 17-02-1998
US 6328944	B1	11-12-2001	DE CA DE EP JP US	19650500 A1 2223377 A1 59700926 D1 0850876 A1 10167717 A 2002035950 A1		10-06-1998 05-06-1998 03-02-2000 01-07-1998 23-06-1998 28-03-2002